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EXAMINER				
PHUONG, DAI				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/527,187

**Applicant(s)**

LI ET AL.

**Examiner**

DAI A. PHUONG

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-33 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 14-33 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 10 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Argument***

1. Applicant's arguments, filed 02/12/2010, with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 14-16 and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Sung Lim et al. (Pub. No.: 20030125031).

Regarding claim 14, Sung Lim et al. disclose a method for routing a connection from a first mobile station to a second mobile station by way of at least one further mobile station in a wireless communication system, comprising:

acquiring positional information on the first mobile station, the second mobile station and the further mobile station ([0013], [0035] to [0037], [0043] to [0044] and [0058]). Sung Lim et al. disclose to determine which each of the mobile stations is located in any one of the service zones); and

determining a route for the connection at a central routing device based on the positional information ([0013], [0035] to [0037], [0043] to [0044] and [0058]);

generating routing information (transmit power level) at the central routing device (radio network controller) corresponding to the determined route ([0013], [0035] to [0037], [0043] to [0044] and [0058]); and

transmitting the routing information (transmit power level) from the central routing device to the first mobile station, the second mobile station and the further mobile station ([0013], [0035] to [0037], [0043] to [0044] and [0058]).

Regarding claim 15, Sung Lim et al. disclose all limitations in claim 14. Further, Sung Lim et al. disclose the method wherein the wireless communication system operates in conjunction with a cellular mobile wireless network having base stations, the first, second ([0007], [0013], [0035] to [0037], [0043] to [0044] and [0058] and further mobile stations are located in wireless range of at least one base station of the cellular mobile wireless network, the routing device transmits the routing information to the at least one base station ([0007], [0013], [0035] to [0037], [0043] to [0044] and [0058]), and the at least one base station transmits the routing information to the first, second and further mobile stations ([0007], [0013], [0035] to [0037], [0043] to [0044] and [0058]).

Regarding claim 16, Sung Lim et al. disclose all limitations in claim 14. Further, Sung Lim et al. disclose the method wherein the mobile stations determine the positional information and transmit the routing information to the at least one base station ([0017], [0053] to [0055]).

Regarding claim 21, Sung Lim et al. disclose all limitations in claim 14. Further, Sung Lim et al. disclose wherein the routing information describes a transmit power level with which

the first, second and further mobile stations are to operate for the connection ([0013], [0035] to [0037], [0043] to [0044] and [0058]).

Regarding claim 22, Sung Lim et al. disclose all limitations in claim 14. Further, Sung Lim et al. disclose the method wherein the routing information describes transmission resources which the first, second and further mobile stations are to reserve for the connection ([0013], [0035] to [0037], [0043] to [0044] and [0058]).

4. Claims 31-33 rejected under 35 U.S.C. 102(b) as being anticipated by Larsen (Pub. No.: 20010036810)

Regarding claim 31, Larsen discloses a wireless communication system, comprising:

a first mobile station, a second mobile station and at least one further mobile station (Fig. 2, [0018] to [0034] and [0171] to [0193] and [0198] to [0222]);

a storage device to store positional information regarding the first mobile station, the second mobile station and the further mobile station (Fig. 2, [0018] to [0034] and [0171] to [0193] and [0198] to [0222]);

a central routing device (access point) to determine a route for a connection between the first mobile station and the second mobile station via the further mobile station and to generate routing information for the route, the route being determined based on the positional information stored in the storage device (Fig. 2, [0018] to [0034] and [0171] to [0193] and [0198] to [0222]);  
and

a transmit unit provided in the routing device to transmit the routing information to the first mobile station, the second mobile station and the further mobile station (Fig. 2, [0018] to [0034] and [0171] to [0193] and [0198] to [0222]).

Regarding claim 32, this claim is rejected for the same reasons as set forth in claim 31.

Regarding claim 33, this claim is rejected for the same reasons as set forth in claim 31.

5. Claims 17-20 and 23-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sung Lim et al. (Pub. No.: 20030125031) in view of Shyy et al. (Pub. No.: 20050282554).

Regarding claim 17, Sung Lim et al. disclose all limitations in claim 15. However, Sung Lim et al. do not disclose the method wherein the mobile stations have a first operating mode in which they operate in the cellular mobile wireless network in accordance with a first wireless standard, the mobile stations have a second operating mode in which they form an ad-hoc network with one another in accordance with a second wireless standard, and during the connection for which the routing device determines the routing information, the mobile stations operate in the second operating mode.

In an analogous art, Shyy et al. disclose the method wherein the mobile stations have a first operating mode in which they operate in the cellular mobile wireless network in accordance with a first wireless standard, the mobile stations have a second operating mode (Bluetooth) in which they form an ad-hoc network with one another in accordance with a second wireless standard, and during the connection for which the routing device determines the routing information, the mobile stations operate in the second operating mode ([0029] to [0044]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sung Lim et al. by specifically including disclose the method wherein the mobile stations have a first operating mode in which they operate in the cellular mobile wireless network in accordance with a first wireless standard, the mobile stations have a second operating mode in which they form an ad-hoc network with one another in accordance with a second wireless standard, and during the connection for which the routing device determines the routing information, the mobile stations operate in the second operating mode, as taught by Shyy et al., the motivation being in order to balance cell loads or prevent cell congestion.

Regarding claim 18, the combination of Sung Lim et al. and Shyy et al. disclose all limitations in claim 14. Further, Shyy et al. disclose the method wherein the mobile stations operate in the second operating mode only when the cellular mobile wireless network reaches a capacity limit ([0029] to [0044]).

Regarding claim 19, Sung Lim et al. disclose all limitations in claim 14. However, Sung Lim et al. do not disclose the method wherein the second mobile station makes available a particular service, service information concerning the service is stored in a storage device, the service information is provided from the storage device to the first mobile station, after the first mobile station receives the service information, the first mobile station signals to the routing device that the first mobile station would like to access the service, and after being signaled by the first mobile station, the routing device establishes a service connection for the service from the first mobile station to the second mobile station by generating routing information for the service connection.

In an analogous art, Shyy et al. disclose the method wherein the second mobile station makes available a particular service, service information concerning the service is stored in a storage device, the service information is provided from the storage device to the first mobile station, after the first mobile station receives the service information, the first mobile station signals to the routing device that the first mobile station would like to access the service, and after being signaled by the first mobile station, the routing device establishes a service connection for the service from the first mobile station to the second mobile station by generating routing information for the service connection ([0029] to [0044]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sung Lim et al. by specifically including the method wherein the second mobile station makes available a particular service, service information concerning the service is stored in a storage device, the service information is provided from the storage device to the first mobile station, after the first mobile station receives the service information, the first mobile station signals to the routing device that the first mobile station would like to access the service, and after being signaled by the first mobile station, the routing device establishes a service connection for the service from the first mobile station to the second mobile station by generating routing information for the service connection, as taught by Shyy et al., the motivation being in order to balance cell loads or prevent cell congestion.

Regarding claim 20, the combination of Sung Lim et al. and Shyy et al. disclose all limitations in claim 19. Furthermore, Sung Lim et al. disclose the method wherein the wireless communication system operates in conjunction with a cellular mobile wireless network having base stations, the first, second and further mobile stations are located in wireless range of at least



one base station of the cellular mobile wireless network, the at least one base station broadcasts the service information stored in the storage device ([0013], [0035] to [0037], [0043] to [0044] and [0058])

Regarding claim 23, Sung Lim et al. disclose all limitations in claim 22. However, Sung Lim et al. do not disclose the method wherein when the connection is to be terminated, the routing device instructs the first, second and further mobile stations to free the transmission resources used for the connection.

In an analogous art, Shyy et al. disclose the method wherein when the connection is to be terminated, the routing device instructs the first, second and further mobile stations to free the transmission resources used for the connection ([0029] to [0044]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Sung Lim et al. by specifically including the method wherein when the connection is to be terminated, the routing device instructs the first, second and further mobile stations to free the transmission resources used for the connection, as taught by Shyy et al., the motivation being in order to balance cell loads or prevent cell congestion.

Regarding claim 24, this claim is rejected for the same reason as set forth in claim 17.

Regarding claim 25, this claim is rejected for the same reason as set forth in claim 18.

Regarding claim 26, this claim is rejected for the same reason as set forth in claim 19.

Regarding claim 27, this claim is rejected for the same reason as set forth in claim 20.

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Regarding claim 28, this claim is rejected for the same reason as set forth in claim 21.

Regarding claim 29, this claim is rejected for the same reason as set forth in claim 22.

Regarding claim 30, this claim is rejected for the same reason as set forth in claim 23.

### **Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dai A Phuong whose telephone number is 571-272-7896. The examiner can normally be reached on Monday to Friday, 9:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dai A Phuong/  
Examiner, Art Unit 2617  
Date: 05/06/2010